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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,575	11/13/2001	David W. Sherrer	23091/10 (ACT-164)	7735

7590 08/27/2003

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EXAMINER

NASRI, JAVAID H

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/054,575

Applicant(s)

SHERRER, DAVID W.

Examiner

Javaid Nasri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 4 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

- a) In the declaration the provisional application shown is 06/249,806 instead of 60/249,806.

Claim Objections

2. Claims 1-10 are objected to because of the following informalities:

- a) In claims 1 and 10, line 14, change "centers" to -- center --.
- b) In claim 10, line 22, and claim 20, line 3, it is not clear what the applicant meant by "a major surface in a (100) crystallographic plane"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (cited in IDS, '733).

Smith et al discloses a first connector (10) having at least one optical component disposed therein, the first connector having opposite side walls (first side wall on which items 24 and 26 are shown and the opposite side wall across it in figure 1. Note: In claim 1, front side is not defined). Each side wall including a groove defined therealong (see figure 6a, 24 is all the way through to the other opposite side wall), a pair of alignment spheres (86, 74) each having a sphere center and a second connector (84, see figure 84) having a planar front face and at least one optical component disposed therein, the second connector including a pair of recesses (88) defined in the planar front face, the recesses being dimensioned to at least partially seat the alignment spheres such that each of the sphere center is distanced from the planar front face so as to mechanically engage a corresponding groove (24, 26) defined within the side walls of the first connector, material selected from the group consisting of steel, tungsten carbide, ceramic, glass and plastic (see col. 8, lines 22-31),

5. Claims 1-3, 5, 7, 8, 11-13, 15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Blonder et al. (cited in IDS, '609).

Blonder et al discloses (see figure 6), a first connector (30) having at least one optical component disposed therein, the first connector having opposite side walls (see marked figure 1, attached). Each side wall including a groove (40, 42) defined therealong, a pair of alignment spheres (46, 48) each having a sphere center and a second connector (12) having a planar front face and at least one optical component disposed therein, the second connector including a pair of recesses (20, 22) defined in the planar front face, the recesses being dimensioned to at least partially seat

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the alignment spheres such that each of the sphere center is distanced from the planar front face so as to mechanically engage a corresponding groove defined within the side walls of the first connector, V-shaped grooves (see figure 7), the sphere center of each alignment sphere is disposed within a respective V-shaped groove (see figure 8), pyramidal in shaped recesses, lens (50), silicon material.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blonder et al (cited in IDS, '609) in view of prior art disclosed.

Blonder et al discloses all the limitations of claims 1 and 11, as shown above. Blonder et al also discloses first and second blocks (see marked figure 1, attached), each block having a major surface (note: **major** is not defined) in a crystallographic plane, the major surface of the first block being joined to the major surface of the second block, the major surfaces of each block being etched to form at least one longitudinal groove (34) for receiving an optical signal carrier,

However, Blonder et al does not disclose:

- a) at least one of the first and second connectors is fabricated from single crystal silicon. Prior art description (see col. 1, lines 14-18) discloses devices made from single crystal silicon, therefore, it would have been

obvious to one of ordinary skill in the art, at the time of the invention for connectors of Blonder et al to be made from single crystal silicon in view of Prior art description (see col. 1, lines 14-18) to make the devices more economically.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blonder et al (cited in IDS, '609) in view of prior art disclosed.

Blonder et al discloses a first connector (30), opposite side wall (see marked figure 1, attached), longitudinal V-shaped groove (40, 42), alignment spheres (46, 48), a second connector (12), a pair of recesses (20, 22), the recesses being dimensioned to at least partially seat the alignment spheres such that each of the sphere center is distanced from the planar front face so as to mechanically engage a corresponding groove defined within the side walls of the first connector, first and second blocks (see marked figure 1, attached), each block having a major surface (note: **major** is not defined) in a crystallographic plane, the major surface of the first block being joined to the major surface of the second block, the major surfaces of each block being etched to form at least one longitudinal groove (34) for receiving an optical signal carrier,

However, Blonder et al does not disclose:

- a) at least one of the first and second connectors is fabricated from single crystal silicon. Prior art description (see col. 1, lines 14-18) discloses devices made from single crystal silicon, therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for connectors of Blonder et al to be made from single crystal silicon in view

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of Prior art description (see col. 1, lines 14-18) to make the devices more economically.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blonder et al (cited in IDS, '609) in view of Smith et al. (cited in IDS, '733).

Blonder et al discloses all the limitations of claim 11, as shown above,

However, Blonder et al does not disclose:

- a) the sphere is fabricated from a material selected from the group consisting of steel, tungsten carbide, ceramic, glass and plastic. Smith et al discloses the sphere is fabricated from a material selected from the group consisting of steel, tungsten carbide, ceramic, glass and plastic (see col. 8, lines 22-31), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to fabricate the spheres of Blonder et al from a material selected from the group consisting of steel, tungsten carbide, ceramic, glass and plastic in view of Smith et al to make it more economical.

Allowable Subject Matter

10. Claims 4 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

REASONS FOR ALLOWANCE

11. The following is an examiner's statement of reasons for allowance:

The primary reason for allowance of the claims is the inclusion of the limitation,

- a) the sphere center of each alignment sphere is distanced from the plane of the front face of the second connector by a distance ranging from about 10 microns to about 250 microns, in combination with other limitations in the claim which is not found in the prior art reference of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 703 308 5876. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 703 308 2710. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

Any correspondence to this action may be mailed to:

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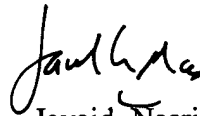
**Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450**

For additional information regarding this new address, which was effective May 1, 2003, see
Correspondence with the United States Patent and Trademark Office, 68 Fed. Reg. 14332
(March 25, 2003).

Or faxed to: 703-308-7722 or 308-7724 (informal or draft communications should be clearly labeled
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

**Crystal Plaza 4, Fourth Floor (receptionist)
2201 South Clark Place, Arlington, Virginia**



Javaid Nasri
Primary Examiner
Art Unit 2839

JN

Jhn
8/18/2003

